

Claims

1. Method for intercepting at least one session involving at least a first network and a second network of different types, the method comprising:

monitoring signalling information, provided in at least one of the first and second networks, of the at least one session, and session content related to the same at least one session provided in another of the first and second networks;

wherein an indication to start interception is delivered between the first and second networks.

2. Method according to claim 1 wherein the step of monitoring signalling information comprises monitoring signalling information provided in an IP Multimedia Subsystem (IMS) network.

3. Method according to claim 1, wherein the step of monitoring session content comprises monitoring session content provided in a General Packet Radio Service (GPRS) network.

4. Method according to claim 1, wherein one of a network element and a function of the first network sends Lawful Interception (LI) information either directly to one of a support node of the second network, an Administration Function (ADMf), and a Delivery Function (DF).

5. Method according to claim 4, wherein said one of the network element and the function of the first network is a Control State Control Function (CSCF).

6. Method according to claim 4, wherein the ADMF is included in the signaling path and commands a support node of the second network to start the interception.

7. Method according to claim 4, wherein the LI information is sent from one of a Call State Control Function (CSCF) and a Policy Decision Function (PDF) of a CSCF to a General Packet Radio Service (GPRS) support node over one of a Gs-interface and an X1_1 -interface.

8. Method according to claim 4, wherein the LI information is sent during media authorization.

9. Method according to claim 4, wherein the LI information is sent to a Gateway General Packet Radio Service Support Node (GGSN) from a Proxy- Call State Control Function (P-CSCF).

10. Method according to claim 9, wherein, when the GGSN receives the LI information, it starts the interception of the content of communication related to the IP Multimedia Subsystem (IMS) session, and delivers the information to a Serving GPRS Support Node (SGSN) by attaching the LI information received from the P-CSCF to a

Create PDP Context Response message, which the SGSN in turn starts the interception of content of communication related to the IMS session.

11. Method according to claim 10, wherein, in case of an inter-SGSN handover, the LI information is transferred from an old SGSN of a monitored user to a new SGSN.

12. Method according to claim 4, wherein an Administration Function (ADMF) performs actual interception activation in a Control State Control Function (CSCF) and a General Packet Radio Service Support Node (GSN) and sends the same LI information to these networks elements, wherein information on a need of interception is stored in the GSN, wherein one of the CSCF and a Policy Decision Function (PDF) of the CSCF includes only an indication of the interception need in the authorization decision.

13. Method according to claim 1, wherein the interception by the second network is activated by the first network using a Delivery Function 2 (DF2) wherein Lawful Interception (LI) information is sent from a Control State Control Function (CSCF) to the DF2 which then sends the LI information to a General Packet Radio Service Support Node (GSN).

14. Method according to claim 1, wherein the interception by the second network is activated by the first network based on mapping of an IP Multimedia

Subsystem (IMS) identity to a General Packet Radio Service Support Node (GPRS) identity.

15. Method according to claim 1, wherein a Mapping Function is provided which translates target indications of the first network to corresponding target indications of the second network associated with a same monitored user.

16. Method according to claim 15, wherein the Mapping Function is provided in an Administration function (ADMF) which receives Lawful Interception (LI) information related to a session in the second network when the session is started.

17. Method according to claim 15, wherein the Mapping Function is provided in an Administration function (ADMF) which receives session identifiers of the first network when the session in the first network is started.

18. Method according to claim 15, wherein the Mapping Function is located in a Delivery Function 2, the Mapping Function commanding a network element of the second network to start interception.

19. Method according to claim 1, wherein the interception in the first network is activated based on an examination of content of communication (CC) of the second network.

20. Method according to claim 19, wherein an entity checks a message received from a support node of the second network for detecting Lawful Interception (LI) information, and forwards such information, if found, to a Mapping Function, the Mapping Function resolving the LI information to a user identity of the first network, wherein one of a network element and a function of the first network is commanded to start interception using the resolved user identity.

21. Method according to claim 20, wherein the Mapping Function is a Mapping Function of one of another network element and a function, the one of the another network element and the function commanding the one of the network element and the function of the first network to start interception using the resolved user identity.

22. Method according to claim 20, wherein the Mapping Function is located in a Delivery Function 3 (DF 3).

23. Method according to claim 20, wherein the entity is a Delivery Function.

24. Method according to claim 20, wherein the entity is a Support Node of the second network.

25. Method according to claim 1, wherein the interception in the first network is activated based on a mapping of an identity of a user used in the second network to

an identity of the same user in the first network.

26. Method according to claim 25, wherein a media authorization is performed between the first and second networks, a User Equipment (UE) sends an Authorization Token to the second network which Authorization Token represents a session being created in the first network, the Authorization Token being reported to a Mapping Function in a Lawful Interception (LI) information message which includes a user identity used in the second network, the Mapping Function activating interception in the first network.

27. Method according to claim 26, wherein the Mapping Function is a Mapping function of an Administration Function (ADMF).

28. Method according to claim 26, wherein the Mapping Function is located in a Delivery Function 2 (DF2).

29. Method according to claim 25, wherein an Administration Function (ADMF) receives Lawful Interception (LI) information containing a session identifier used in the first network from a network element of the second network, the ADMF uses the session identifier directly for interception activation in the first network.

30. Method according to claim 1, wherein the interception in the first network is activated based on upload of Lawful Interception (LI) information from a network

element of the second network.

31. Method according to claim 30, wherein the LI information is uploaded over a Go interface.

32. Method according to claim 1, wherein information of matching triggers of the first network is forwarded to the second network by using identities known in the second network.

33. Method according to claim 32, wherein the used identities are one of an International Mobile Subscriber Identity (IMSI) and a combination of a General Packet Radio Service (GPRS) Charging ID and a Gateway General Packet Radio Service Support Node (GGSN) identification.

34. Method according to claim 1, wherein the decision of interception is done for every session created in the first network.

35. Method according to claim 1, wherein the decision of interception issued for a session created in the first network is maintained in the first network after a termination of the session for use for at least one following session.

36. Method according to claim 1, wherein monitoring in the first network is activated by sending information to the first network when the interception is originally activated using target identifiers of the second network.

37. Method according to claim 36, wherein the target identifiers are one of an International Mobile Subscriber Identity (IMSI), a Mobile Subscriber ISDN Number (MSISDN), and an International Mobile Equipment Identity (IMEI).

38. System for intercepting at least one session involving at least a first network and a second network of different types, the system comprising:

means for monitoring signalling information, provided in one of the first and second networks, of the at least one session, and session content related to the same at least one session provided in another of the first and second networks; and

means for delivering an indication to start interception between the first and second networks.

39. System according to claim 38, wherein the first network is an IP Multimedia Subsystem (IMS) network.

40. System according to claim 38, wherein the second network is a General Packet Radio Service (GPRS) network.

41. System according to claim 38, wherein the first network comprises one of a network element and a function which is adapted to send Lawful Interception (LI) information through one of directly to a support node of the second network, to an Administration Function (ADMF) and to a Delivery Function (DF).

42. System according to claim 41, wherein said network element or function of the first network is a Call State Control Function (CSCF).

43. System according to claim 41, wherein the ADMF is included in a signaling path and is configured to command a support node of the second network to start the interception.

44. System according to claim 38, wherein the first network comprises one of a Call State Control Function (CSCF) and a Policy Decision Function (PDF), which is configured to send Lawful Interception (LI) information directly to a support node of the second network over a Go-interface.

45. System according to claim 38, comprising one of an Administration Function (ADMF), a Delivery Function 2 (DF2), and a Delivery Function 3 (DF3) which is configured to communicate with the first and second network.

46. System according to claim 45, wherein the one of the ADMF, the DF2, and the DF3 comprises a Mapping Function.

47. Network element to be used in a system according to claim 38, the network element comprising:

means for delivering an indication to start interception between the first and second networks.

48. Network element according to claim 47, further comprising at least one of a mapping function and a mediation function.

49. Network element according to claim 47, being implemented as one of an Administration Function (ADMF), a Delivery Function 2 (DF2) and a Delivery Function 3 (DF3) which is configured to communicate with the first and second networks.